

Morse, Bob

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Sent: Wednesday, July 22, 2020 11:24 AM
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Cc: Belanger, Todd; daniel.r.griffiths@parsons.com
Subject: Seneca PFAS ESI - Initial data for discussion
Attachments: Fig 2 SEAD26_PFAS_ESI_Prelim_072120.pdf; Fig 3 SEAD26_PFOA+PFOS Conc.pdf; Fig 1 SEAD25FH_PFAS_ESI_Prelim_071420.pdf

Categories: EZ Record - Shared

All:

This email provides data updates for the PFAS ESI at Seneca Army Depot.

As part of this phase of the ESI, the Tech Memo (submitted April 2020) identified a need for additional wells at the firehouse and at SEAD-26, whose locations are dependent on results of initial wells (MWFH-06, MWFH-07, MWFH-08, MW26-21 and MW26-22).

From the memo:

	Initial Wells	Subsequent wells
FH	MWFH-06, MWFH-07, MWFH-08	MWFH-09/D, MWFH-10/D
SEAD-26	MW26-21 and MW26-22	MW26-23, MW26-24/D, MW26-25

We have received the lab data for these five wells, and the results are posted on the attached Figures 1 and 2.

A guide to reading the figures:

- The new data are boxed in a pink box – there's a lot of info on the figures and this will help direct your focus.
- The original location of the subsequent wells, as proposed in the memo, is represented in red circles. The discussion below includes a rationale for proposing to shift the location (shown by a green symbol).

Firehouse – Figure 1:

- MWFH-06, MWFH-07, MWFH-08: PFAS compounds were detected in these wells at very low concentrations. This suggests that the Firehouse impacts are bounded on the North/Northeast side and the source is in the area of MWFH-04 and MWFH-05.
- Area between MWFH-04 and MWFH-05 is approximate source area. Proposed location for MWFH-09/D still expected to be good location to investigate shallow/deep source. No change in location from the memo
- Propose shifting location of MWFH-10/D:
 - Memo: "Install an additional bedrock well pair (MWFH-10/D) in the downgradient direction"
 - Figure 1 shows the original proposed location in a red circle with an arrow pointing to the proposed location for MWFH-10/D.
 - Given that MWFH-02 has low concentrations, we believe that this adjustment puts MWFH-10/D in a more downgradient path of the Firehouse source to try and intercept the plume west and between FH-02 and FH-04.

- Recommend that the new well pairs (FH-09/D and FH-10/D) are 4-inch wells to increase sampling volume
- Proposed surface water locations SWFH-01, SWFH-02 and SWFH-03 are dry. Propose sampling these after a significant rain event; approximately 24 hours after.

SEAD-26 – Figure 2 and 3:

- MW26-21 and MW26-22 (see pink boxes on Figure 2) were on either side of MW26-20 and PFOA/PFOS data for these new wells were ND. Total PFAS at MW26-21 is 7.85 ng/L and at MW26-22 is 0.6 ng/L.
- This suggests that plume is quite narrow.
- Figure 3 is included to illustrate the entire plume on one map. The chemboxes with data are replaced with colored dots representing a range of concentrations.
 - Red dots = Locations of PFOA + PFOS above 70 ng/L
 - Yellow dots = Locations of PFOA + PFOS between 10 ng/L and 70 ng/L
 - Blue dots = Locations of PFOA + PFOS below 10 ng/L
- In the memo MW26-23, MW26-24/D, and MW26-25 were proposed to be further downgradient along the road to identify the toe of the plume (red circles). Given that the two initial wells (MW26-21 and -22) were ND, and roughly extrapolating the concentration decline from MW26-16 to MW26-20, we estimate the plume toe would be approximately 400-500ft further downgradient from MW26-20. Based on the topography and surface water features (pond and wetland area) which likely act as a local discharge area for shallow groundwater and the suspected distance to the toe of the plume, we propose shifting the subsequent well locations. See Figure 2:
 - MW26-23/D repositioned to capture expected toe of plume (based on concentration change with distance from MW26-16 to MW26-20; expected plume toe at pond). Additionally, shallow groundwater flow expected to bend north and west towards pond/wetland area which is acting as local discharge area.
 - MW26-24 - remains where proposed
 - MW26-25 - moved north to capture any local shallow GW discharge from wetland area
 - Additional SW sample (SW26-05) added in discharge channel from pond.

We look forward to our discussion on the phone tomorrow.

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